DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

(Water Protection Bureau)

Name of Project: Hungry Horse Development WWTP

Type of Project: Discharge residential strength wastewater to a subsurface drainfield under the Montana Ground Water Pollution Control System permit program

Location of Project: The site is situated in Section 8, T 30N, R 19W or North 48°, 22', 54" north latitude and 114°, 03', 28" west longitude.

City/Town: Hungry Horse **County:** Flathead

Description of Project: The proposed Hungry Horse Development (HHD) will consist of a primary school, residential dwellings and commercial buildings. The HHD wastewater treatment system will treat domestic strength wastewater from these units. Effluent includes gravity effluent mains that will transport wastewater from each residence, business and school to a centralized wastewater treatment system. Wastewater influent to the wastewater treatment facility is screened to remove solids. Influent is then treated in anoxic and aerobic treatment tanks. Wastewater is conveyed to one of two anoxic treatment tanks where nitrogen compounds are broken down and initial bacteria treatment occurs. Wastewater is then pumped to one of two aeration tanks where wastewater undergoes carbonaceous oxidation and nitrification. From this point wastewater will be conveyed to one of two, Membrane Bioreactors (MBR). In the MBR additional carbonaceous oxidation and nitrification occurs. Wastewater is then subject to disinfection via ultraviolet treatment. After treatment in the MBR facility wastewater will be conveyed to two 5,000 gallon dosing tanks. IP bed will be dosed to allow for optimal treatment.

The wastewater treatment system will have the capacity to discharge a daily maximum of 300,000 gpd (design capacity) to the groundwater. Therefore the permit is based on a design capacity of 300,000 gpd. The proposed permit authorizes discharge of residential strength wastewater to one (1) Infiltration/percolation (IP) cell which will then discharge to ground water. The wastewater treatment system will discharge every month of the year.

Agency Action and Applicable Regulations: The proposed action is to issue an individual MGWPCS discharge permit to a residential strength wastewater treatment operation and specify effluent limitations, monitoring and discharge reporting requirements. The Montana Water Quality Act 75-5-101 *et seq.* Montana Ground Water Pollution Control System Administrative Rules of Montana (ARM) 17.30.10 *et seq*. and Montana Pollutant Discharge Elimination System ARM 17.30.12 *et seq.*

Summary of Issues: The purpose of this action is to regulate the discharges of pollutants to state waters from the regulated facility. Issuance of an individual permit will require the facility to implement design and management practices to prevent pollution and degradation of groundwater. The action will have benefits to water quality.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts). *Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Reference other permit analyses when appropriate (ex: statement of basis). Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.*

N = Not present or No Impact will likely occur. *Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).*

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	**[N]** Discharge will increase moisture in the vadose zone. There are no limiting layers present in the soil profile that would impede continued treatment of effluent discharged from the drainfield. Soil deposits in the area are composed of stratified gravel, sand, and silt.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	**[N]** Department developed numeric permit limits ensure that water quality standards will be met and there would be no water quality or nondegradation significance limit exceedances.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	**[N]** No significant impacts have been determined. Some dust may result during construction.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	**[N]** No significant impacts have been identified. Disturbed areas are to be covered with native soils and reseeded, without reseeding the native grasses may have a difficult time re-establishing themselves.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	**[N]** No significant impacts have been identified. The closest surface water capable of supporting significant amounts of wildlife, fish and bird is the Flathead River approximately 6,750 feet down gradient of the discharge location.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	**[N]** No significant impacts have been identified from the EA, however the Montana National Heritage Program reported that Canis lupus, Gavia immer, Haliaeetus leucocephalus, Salvelinus confluentus, Oncorhynchus clarki lewisi, Lynx Canadensis, Ursus arctos, Gulo gulo, Martes pennanti, Prophysaon humile, Lathyrus bijugatus, Silene spaldingi, Aloina brevirostris, Peatland, Cypripedium parviflorum, Aplenium trichomanes, Cyperus erythrorhizos, Eriophorum gracile, Crisium brevistylum, Bryum calobryoides, Botrychium ascendens, Catilleja cervina and Amblyodon dealbatus, do exist within the designated search local.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	**[N]** No significant impacts have been identified from the EA. The Montana State Historic Preservation Office reported that no previously recorded sites within the designated search locales. They recommend at his time a cultural resource inventory was unwarranted.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	**[N]** No significant impacts have been identified.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	**[N]** No significant impacts have been identified from the EA. Hydraulic conductivity values indicate a rapid rate of groundwater movement. Ground water levels range from approximately 69 to 75 feet below the surface. Potential for ground water depletion is minimal.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	**[N]** No significant impacts have been identified from the EA.

IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	**[N]** No significant impacts have been identified. There is potential for health and safety risks to arise during construction. With added vehicle traffic, there is potential for increased motor vehicle accidents.
12. INDUSTRIAL, COMMERCIAL AND	**[N]** No significant impacts have been identified. As this is

IMPACTS ON THE HUMAN ENVIRONMENT	
AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	a new wastewater treatment system there will be a 100 % increase in activity at this facility. No commercial or industrial activities are planned.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	**[N]** No significant impacts have been identified.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	**[N]** No significant impacts have been identified from the EA.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	**[N]** No significant impacts have been identified from the EA. The facility is located off of rural roads and the increased activity is likely to increase traffic on these roads.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	**[N]** No significant impacts have been identified from the EA.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	**[N]** No significant impacts have been identified from the EA. Accesses remain unaltered
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	**[Y]** The wastewater treatment system is for the proposed Hungry Horse development and the existing community of Hungry Horse. As a result of this project the population is expected to increase.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	**[N]** No significant impacts have been identified from the EA.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	**[N]** No significant impacts have been identified from the EA.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	**[N]** No significant impacts have been identified from the EA
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not,	**[N]** No significant impacts have been identified from the EA

IMPACTS ON THE HUMAN ENVIRONMENT	
no further analysis is required.	
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	**[N]** No significant impacts have been identified from the EA
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	**[N]** No significant impacts have been identified from the EA

23. **Description of and Impacts of other Alternatives Considered:**

A. No Action: Under the 'No Action' alternative the Department would not issue an individual ground water discharge permit under the Montana Ground Water Pollution Control System administrative rules. The proposed action will have environmental benefits compared to leaving the facility unpermitted.

B. Approval with modification: The Department has not identified any necessary modifications to grant approval.

24. **Summary of Magnitude and Significance of Potential Impacts:**
Impacts were assessed with the assumption that the permittee will comply with the terms and conditions of the permit. Violations of the permit could lead to significant adverse impacts to state waters. Violations of the permit are not an effect of the agency action, because the permit itself forbids such activities. However, the Department has taken steps to ensure that violations do not occur. The terms of the permit have been clarified and modified in response to comments from regulated parties, the public and other agencies. The Department provides assistance to applicants in understanding and implementing the requirements of the permit. The Department also conducts periodic inspections of permitted facilities, and identifies potential problems with design or management practices. If violations of the permit do occur, the Department will take appropriate action under the water quality act. Section 75-5-617, MCA. Enforcement sanctions for violations of the permit include injunctions, civil and administrative penalties, and cleanup orders.

25. **Cumulative Effects:** The issuance of this individual MGWPCS discharge permit would not have cumulative effects because the permit prohibits pollution and degradation of state waters.

26. **Preferred Action Alternative and Rationale**: The preferred action is to authorize Hungry Horse Development LLC under an individual MGWPCS Discharge Permit. This action is preferred because the permit program provides a regulatory mechanism for protecting and improving water quality by applying control technology to the source discharge of domestic wastes generated at the proposed wastewater treatment facility.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [**X**] No Further Analysis

Rationale for Recommendation:

27. Public Involvement: This draft EA will be posted on the Department web page: http://www.deq.state.mt.us/ea.asp. For copies of the draft EA or to submit comments, write or call the Montana Department of Environmental Quality c/o Dianne Beaman, P.O. Box 200901, Helena MT 59620-0901, telephone (406) 444-3080. Comments will be received for 30-days after the date of the signature below.

The Department maintains a list of persons who have expressed an interest in all environmental water quality related issues. The Department will send a copy of this document to all persons who have submitted their name, address, and telephone number to the Department for the purpose of being included on the water quality interested parties' mailing list.

28. Persons and agencies consulted in the preparation of this analysis:
Damon Murdo, Cultural Records Manager, Historical Preservation Society
Montana Bureau of Mines and Geology Web site
Montana Fish and Wildlife Web page, animal species information
Natural Resource Information System, Montana State Library

EA Checklist Prepared By: Louis Volpe

Louis Volpe	February 7, 2008
(Name)	Date

EA Revisions and Corrections: As a result of comments received during the 30-day public comment period

Louis Volpe	

Approved By:

Bonnie Lovelace, Chief,
Water Protection Bureau

Signature

Date